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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------|---------------------|------------------|
| 10/810,772 | 03/26/2004 | Andrew Slark | 3080.BDG | 9608 |
| 7590 Charles W. Almer National Starch and Chemical 10 Findeme Avenue Bridgewater, NJ 08807 | | EXAMINER NILAND, PATRICK DENNIS ART UNIT 1714 PAPER NUMBER | | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE | | |
| 3 MONTHS | 02/07/2007 | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | |
|------------------------------|-------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/810,772 | SLARK ET AL. |
| | Examiner Patrick D. Niland | Art Unit 1714 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 November 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3,5,7-14 and 18-21 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-3, 5, 7-14, and 18-21 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

1. The amendment of 11/13/06 has been entered. Claims 1-3, 5, 7-14, and 18-21 are pending.
2. Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The instant claims 7-8 recite amounts in "parts by weight". It remains unclear if the percentage is based on the entire composition of claim 1 including those components encompassed by "comprising", only the recited components, one of the individual components, or some other basis.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 9-14, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5001210 Coury et al..

Coury discloses mixing dihydroxyurethanes made from cyclic carbonates and polyamines which fall within the scope of the instantly claimed "urethane diols" and polyisocyanates which are thermoplastic prior to their reaction and therefore capable of being used as a "reactive

polyurethane hot melt adhesive" on some substrate. These mixtures, prior to their reaction, fall within the scope of the instantly claimed compositions. See the abstract; column 1, lines 16-30; column 2, lines 40-68; column 3, lines 1-37; column 5, lines 4-47, particularly 15-25 and 38-47 which prior to reaction falls within the scope of the instantly claimed compositions because the compositions are meltable and useful as adhesive, and lines 50-68; column 6, lines 1-4, which prior to reaction falls within the scope of the instantly claimed compositions because the compositions are meltable and useful as adhesive; and the remainder of the document. It is not seen that the method step of the instant claim 14 differentiates the claimed composition from that of the patentee. The patentee mixes the components of claim 1 which appears to fall within the scope of the method of the instant claim 15. Since the instantly claimed components are mixed together the claimed open time and/or green strength improvements must be met. The adhered articles inferred from the patentee's recitation to use the above compositions as adhesives falls within the scope of the instant claim 19.

The argument re no disclosure of moisture curable is not persuasive. The compositions of the patentee have NCO groups which are necessarily inherently capable of reacting with moisture in our atmosphere to cure via the well known NCO+H₂O reaction, though the instant claims do not require "moisture curable". Many of the instant claims are directed to the composition per se which the applicant's arguments re "use" do not apply to since the patentee's compositions contains the required ingredients. The amended ingredients recite "optionally" and are therefore not required. The instant claims recite no NCO/OH ratio and the applicant's arguments relating this ratio to hot melt adhesives is not supported by probative evidence. The composition of the patentee will cure necessarily and inherently as disclosed therein. Where it is

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contacted with the atmosphere, water will necessarily enter the reaction to some degree. “Typically” and “usually” denote things that are clearly not required of the instantly claimed invention. The applicant’s arguments using these terms are not persuasive because the associated arguments are clearly not required of the instantly claimed inventions. The instant claims recite no backbone architecture. The associated applicant’s argument is therefore not persuasive. The argued reactions are not excluded by the instant claims and there is no probative evidence that they do not occur to some degree in the reaction mixtures encompassed by the instant claims in a manner commensurate in scope with the instant claims. The patentee discloses the instantly claimed ingredient combinations in an anticipating manner. The limitations of argued by the applicant are not in the instant claims nor inherent to “reactive polyurethane hot melt adhesive composition” necessarily. There is no probative evidence to the contrary. This rejection is therefore maintained.

6. Claims 1-3, 5, 7-14, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1378531 A1 Kesselmayer in view of US Pat. No. 5001210 Coury et al..

Kesselmayer discloses hot melt adhesives containing polyol, polyisocyanate, and acrylic polymer, which falls within the scope of the instant claims 1 and 5, at the abstract; page 2, lines 25-43, which encompasses the instantly claimed method steps, and lines 45-58; page 3, lines 1-14 of which lines 8, 10-11, and 13-14 encompasses the instantly claimed urethane diols and lines 11-13 encompasses their use with the polyols of the instant claims 2-3. It would have been obvious to one of ordinary skill in the art to use the instantly claimed urethane diols as the polyol of Kesselmayer because they are encompassed by the above noted sections of Kesselmayer and they would have been expected to give the benefits of such urethane diols to adhesives as taught

throughout Coury et al.. Where the larger amounts of acrylic polymer of page 10, lines 15-18 are used, the amounts of the instant claims 7-8 are met if the claimed amount is for the weight of the entire composition. It is not seen that the method step of the instant claim 14 differentiates the claimed composition from that of the above references. The references mix the components of claim 1. Since the instantly claimed components are mixed together the claimed open time and/or green strength improvements must be met. It would have been obvious to one of ordinary skill in the art to use the instantly claimed tackifying resins because they are well known for use in hot melt adhesives and they would have been expected to give the property which their name defines to the adhesives of the above cited prior art though they are optional in claim 1. Page 6, lines 17-22 reads on the new claims 20-21.

Arguments applicant applies to this rejection from the above rejection are rebutted for the same reasons as stated in paragraph 5 above as they apply to this rejection. Since the primary reference here discloses moisture curable hot melt adhesive, the arguments are even more pertinent. Since the applicant recognizes this in their arguments to this rejection, it is not seen how the applicant's statement that their arguments re Cuory alone apply to this rejection. The argument that urethane diols are not in Kesselmayer's preferred list of ingredients does not teach away as preferred mode is well established not to teach away. Arguments to the acrylic of Kesselmayer are not persuasive since these polymers are encompassed by "comprising" and are not excluded by the instant claim language. Acrylic copolymers are taken as being encompassed by the instantly claimed optional acrylic polymers which also encompasses the argued moieties. The skilled artisan would therefore not be led away from the instant invention. There are no showings of unexpected results commensurate in scope with the cited prior art and the instant

claims. This rejection is therefore maintained for the reasons stated above and for the teachings within the prior art as they would be understood by the ordinary skilled artisan.

7. Claims 1-3, 5, 7-8 and 13-21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. Application Publication US 2002/0164486 A1 Guse et al..

Guse et al. discloses the instantly claimed hot melt adhesives at the abstract; sections [0014]-[0040], particularly sections [0033] which discloses polyurethane diols which falls within the scope of the instantly claimed urethane diols with sufficient specificity so as to anticipate the use of the instantly claimed urethane diols particularly given Guse's preference for diols and the low amount of picking and choosing required to choose polyurethane diols. Sections [0027] and [0034] fall within the scope of the instant claims 7-8. Section [0033] encompasses mixtures of the urethane diols with the polymers of the instant claims 2-5. The resins of section 0040] are tackifying resins. It is not seen that the method step of the instant claim 14 differentiates the claimed composition from that of the above reference. The reference mixes the components of claim 1 which appears to fall within the scope of the method of the instant claim 15. Since the instantly claimed components are mixed together the claimed open time and/or green strength improvements must be met. The adhesive method of the reference falls within the scope of the instant claims 15-18 and the resulting article falls within the scope of the instant claim 19. See sections [0057]-[0106] and claim 30. Section [0057] reads on claims 20-21.

The argument that the reference does not teach how to make the disclosed polyurethane diols is not persuasive as the instant claims require no such method, the patent need not be a blueprint as is well established in the caselaw, and the ordinary skilled artisan in this art is of a very high level who knows how to make a polyurethane diol in this well established and old art. Arguments

relating to this issue are therefore not persuasive. The instant claims recite no molecular weight. This argument is therefore not persuasive. For the clear teachings of the reference and the reasons stated above, the applicant's arguments are not persuasive on their face. The reference discloses the instantly claimed ingredient combinations in an anticipating manner. The limitations of argued by the applicant are not in the instant claims nor inherent to "reactive polyurethane hot melt adhesive composition" necessarily. Furthermore, the reference composition is described as a hot melt adhesive which rebuts most of these arguments by itself. There is no probative evidence to the contrary. This rejection is therefore maintained.

8. Claims 1-3, 5, 7-14, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. Application Publication US 2002/0164486 A1 Guse et al. in view of US Pat. No. 5001210 Coury et al..

Guse et al. discloses the instantly claimed hot melt adhesives at the abstract; sections [0014]-[0040], particularly sections [0033] which discloses polyurethane diols which falls within the scope of the instantly claimed urethane diols with sufficient specificity so as to anticipate the use of the instantly claimed urethane diols particularly given Guse's preference for diols and the low amount of picking and choosing required to choose polyurethane diols. Sections [0027] and [0034] fall within the scope of the instant claims 7-8. Section [0033] encompasses mixtures of the urethane diols with the polymers of the instant claims 2-5. The resins of section 0040] are tackifying resins. It is not seen that the method step of the instant claim 14 differentiates the claimed composition from that of the above reference. The reference mixes the components of claim 1 which appears to fall within the scope of the method of the instant claim 15. Since the instantly claimed components are mixed together the claimed open time and/or green strength

improvements must be met. The adhesive method of the reference falls within the scope of the instant claims 15-18 and the resulting article falls within the scope of the instant claim 19. See sections [0057]-[0106] and claim 30. Section [0057] reads on claims 20-21.

It would have been obvious to one of ordinary skill in the art to use the instantly claimed combinations of ingredients in the instantly claimed methods to form the instantly claimed articles from the disclosure of Guse because Guse encompasses the use of the instantly claimed combinations of ingredients in the instantly claimed methods to form the instantly claimed articles in the sections cited above and these adhesives would have been expected to give the properties described by Guse.

It would have been obvious to one of ordinary skill in the art to use the urethane diols of the instant claims 9-12 as the polyol of Guse because they are encompassed by the above noted sections of Guse and they would have been expected to give the benefits of such urethane diols to adhesives as taught throughout Coury et al..

The argument that the reference does not teach how to make the disclosed polyurethane diols is not persuasive as the instant claims require no such method, the patent need not be a blueprint as is well established in the caselaw, and the ordinary skilled artisan in this art is of a very high level who knows how to make a polyurethane diol in this well established and old art. Arguments relating to this issue are therefore not persuasive. The instant claims recite no molecular weight. This argument is therefore not persuasive. For the clear teachings of the reference and the reasons stated above, the applicant's arguments are not persuasive on their face. The reference discloses the instantly claimed ingredient combinations in an anticipating manner. The limitations of argued by the applicant are not in the instant claims nor inherent to

“reactive polyurethane hot melt adhesive composition” necessarily. Furthermore, the reference composition is described as a hot melt adhesive which rebuts most of these arguments by itself. There are no showings of unexpected results commensurate in scope with the cited prior art and the instant claims. There is no probative evidence to the contrary. This rejection is therefore maintained.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick D. Niland
Primary Examiner
Art Unit 1714